

ITC: Connecting Energy Infrastructure

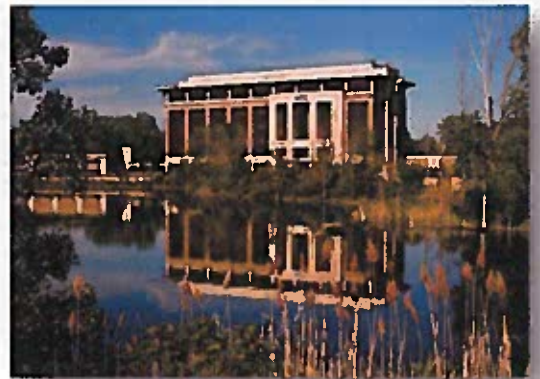
Simon S. Whitelocke
Vice President, ITC Holdings Corp., and President, ITC Michigan



May 23, 2017

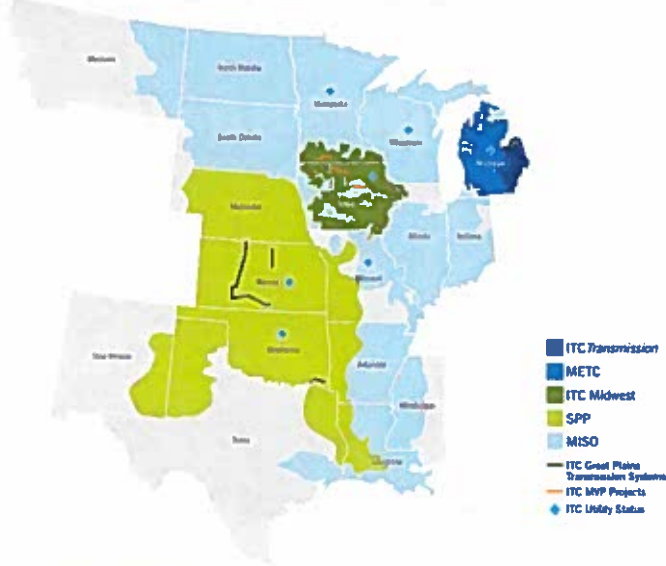
TOPICS OF DISCUSSION

- ITC overview
- Customer focus
- Project approach
- Value proposition
- Industry challenges



ABOUT ITC

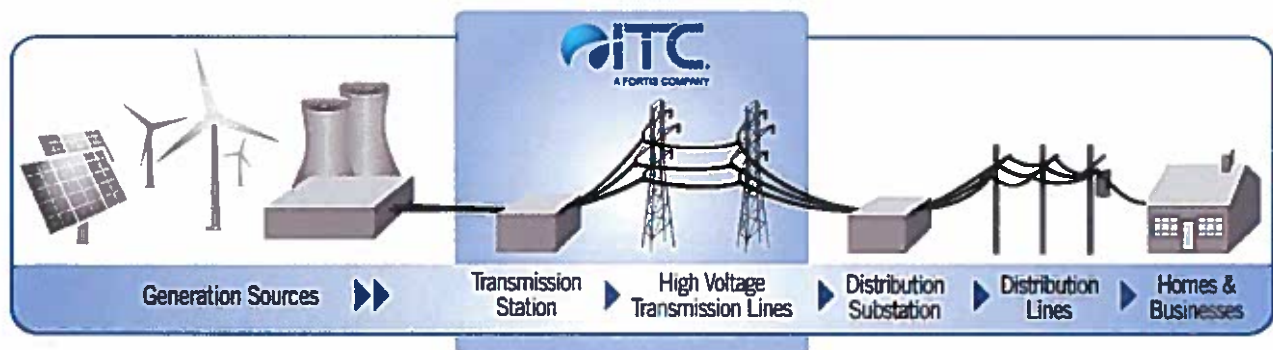
\$6.5B Invested In Infrastructure Since 2003



- 4 Subsidiaries in 8 states
- Headquartered in Novi, MI
- 15,800 Circuit miles
- 90,000 Square mile service territory
- 600+ Employees making a difference
- 500+ dedicated Contractors
- Member of 4 RTOs
- FERC-regulated independent transmission company
- A Fortis company



THE POWER FLOW PROCESS



Electric transmission is the bulk delivery of electrical energy from power generating plants along high voltage lines to the local distribution system of utilities serving communities.



OUR COMMITMENT SINCE INCEPTION

Deliver customer benefits unique to ITC's business model:

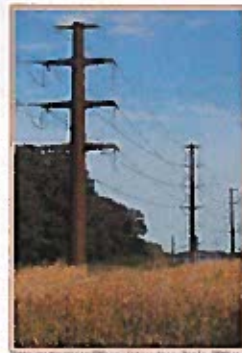
- Improve and maintain system reliability
- Reduce system congestion
- Expand access to competitive energy markets
- Facilitate interconnection of new generation
- Lower overall cost of delivered energy



REPUTATION AND TRACK RECORD

How We've Improved the Grid

- Acquiring and integrating three transmission businesses
- Pioneering a greenfield transmission-only utility
- Identifying and facilitating critical regional projects
- Partnering with local utilities on projects
- Tying generation to the grid
- Developing contracted transmission projects

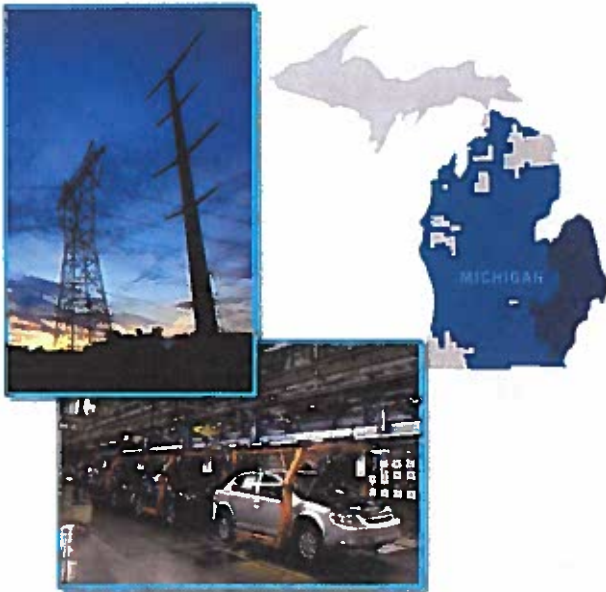


SYSTEM STATISTICS

	ITC Transmission	METC	ITC Midwest	ITC Great Plains	ITC Interconnection
SYSTEM PEAK LOAD	12,745MW	9,469MW	3,724MW	—	—
SERVICE AREA	Southeast Michigan	Lower Peninsula of Michigan	Portions of Iowa, Minnesota, Illinois and Missouri	Serves SPP and South Central Region	—
TOTAL TRANSMISSION MILES	~ 3,100	~ 5,600	~ 6,600	~470	4 miles in SW Michigan
RTO MEMBERSHIP	MISO	MISO	MISO	SPP	PJM
ESTABLISHED	Assets Acquired February 28, 2003	Assets Acquired October 10, 2006	Assets Acquired December 20, 2007	Formed August 18, 2006	Formed June 1, 2016



ITC MICHIGAN



Two Operating Companies:

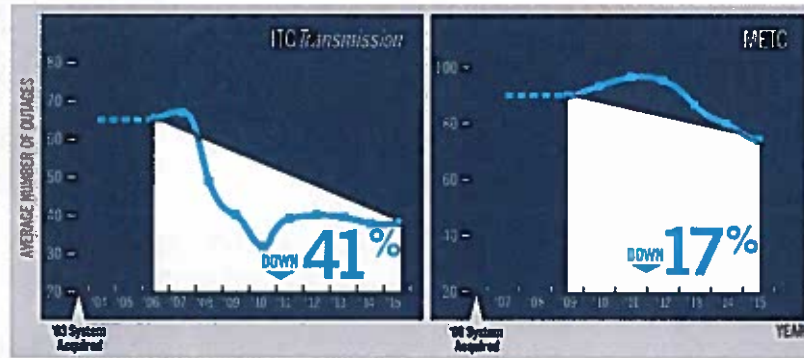
- ITC Transmission – acquired 2003
- Michigan Electric Transmission Company (METC) – acquired 2006
- Combined:
 - Transmission Lines – 8,700 circuit miles
 - Transmission Towers and Poles – 55,600
 - Substations – 283
 - Voltage Levels: 120kV to 345kV
 - Capital Investment: ~\$3.5B to date
 - Headquarters: Novi, Michigan



ITC MICHIGAN

Modernizing and Maintaining the Transmission Grid

OUTAGE DECREASE UNDER ITC OWNERSHIP
ITC Michigan | 3-year rolling averages



ITC's RANGE OF CUSTOMERS



CUSTOMER FOCUS

Collaborate With Customers

“Having ITC as part of the process meant the system could be examined with a long-term view in mind, which was critical for minimizing production disruptions and lost product during the transition period.”

– Rod Williamson
Global Energy Category Manager
Dow Corning/Hemlock Semiconductor



HSC HEMLOCK SEMICONDUCTOR
Powering Tomorrow with Proven Performance



“We have a great relationship with ITC, they definitely understand our needs.”

– Wyandotte Municipal Services,
Wyandotte, Michigan



PROJECT MANAGEMENT

Keeping Projects on Schedule and on Budget

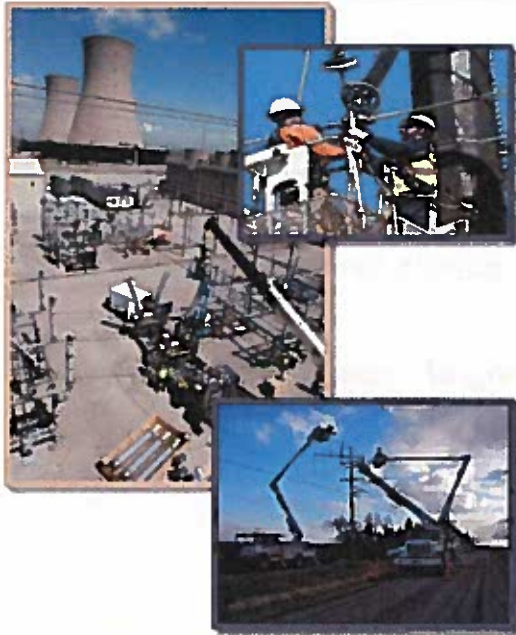


“This was a complex project over several years as the wind farm went online in two phases. ITC worked closely with us and Invenergy to finish each phase of the interconnection process on schedule so we could meet our commitments to our customers in a timely manner.”

– Richard F. VanderVeen, Founder,
Gratiot County Wind Project



FIELD OPERATIONS



Outsourced Business Model

Field Ops & Maintenance / Warehouse & Logistics

- Dedicated contract workforce of 500+
- Utility Lines Construction (ULC), subsidiary of Asplundh
- Vehicles, tools, equipment and facilities owned by ITC
- Contractor has dedicated training group for all disciplines
- Perform all operations, maintenance, and smaller capital
- Larger projects contracted to strategic alliance contractors
- Warehouse / Crew Pullouts – ITC facilities in Michigan



LARGE-SCALE CAPITAL PROJECTS

Large-Scale Projects

Thumb Loop



The Thumb Loop brings an increase in transmission system capacity and regional reliability while providing more efficient transmission of renewable energy.

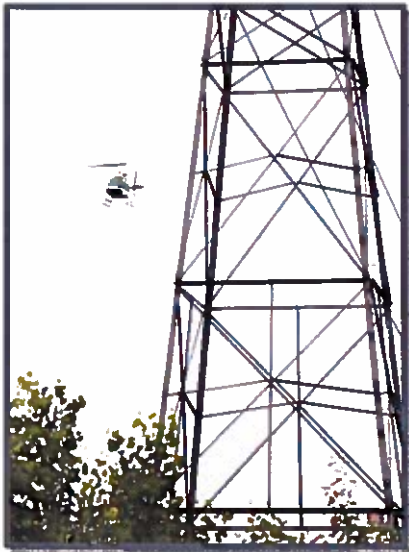
Conceiving and completing the Thumb Loop project demonstrates the value of forward-thinking, collaborative planning between the state and key stakeholders.

- 140 miles of 345 kV transmission lines
- 4 new substations
- 5,000 MW capacity
- Completed May 2015

Construction phase of the Thumb Loop project alone had an economic impact to the state of \$366 million.



OPERATIONS & MAINTENANCE



Preventive Maintenance

Regular inspections and testing of lines, structures and substations identifies equipment for possible maintenance or replacement

- Aerial and ground patrols identify damaged or worn equipment
- Real-time monitoring of substation transformers for problems
- Transmission circuits with repeated outages are investigated



OPERATIONS & MAINTENANCE

Integrated Vegetation Management Program

- Tree interference with transmission lines is a leading cause of electric power outages and poses a safety threat to the public.
- Proper vegetation management is essential to preventing such outages to protect electric reliability and public safety.



STORM RESTORATION



Restoring power quickly is a core competency and strategic advantage for ITC

- Supply chain provides necessary material whenever a disaster requires line restoration
- Numerous warehouses across footprint can provide necessary structures and other material

Mutual assistance program memberships enable a consistent, unified response

- Restore service effectively and efficiently
- Develop lasting relationships among electric utilities
- Effectively collaborate with legislative groups to develop consistent standards
- Provides a predefined mechanism to share resources expeditiously
- ITC participates in two mutual assistance organizations



WEATHERING THE WIND

In March 2017, Michigan experienced a severe wind storm leaving more than 1 million customers without power

- ITC's systems remained resilient throughout the storm
- No sustained outages on our systems
- ITC worked closely with customers to aid restoration efforts, providing crews from as far as our Midwest territory, and vegetation contractors, to help restore service



SYSTEM RESILIENCY AND PHYSICAL SECURITY

Our security measures focus on the most critical assets and needs.



PARTNERSHIPS



CYBER SECURITY STRATEGY

Strong
governance
& oversight

Understand and
manage risk

Build community of
experts and **user**
education

Institute best
practices

Provide **threat**
analysis and
remediation

Optimize services,
establish
metrics and
promote compliance



VALUE PROPOSITION

Building a Better, Stronger Grid

- Ensuring the connection between consumers and the energy they need is efficient, reliable and cost-effective
- Enabling electricity market competition to drive a robust economy
- Providing customers with solutions to best meet the energy needs of the 21st century economy



VALUE OF ITC: COST SAVINGS

Breakout of customer savings between 2008 and 2014 in avoided renewable energy capital costs, according to ICF International:

- Michigan projects saved customers approximately **\$250 million** in avoided renewable energy production costs.



VALUE OF ITC: MARKET EFFICIENCY



Breakout of customer savings between 2010 and 2015 in reduced energy production costs in the MISO region due to decreased system congestion, according to ICF:

- Savings to Michigan customers: **\$111 million**



VALUE OF ITC: ECONOMY AND JOBS

Economy and Jobs - Michigan



ITC's transmission investments and operations support the economy and jobs in Michigan:

- In 2014, ITC Michigan's operating expenses helped support 3,000 direct and indirect jobs, and \$270 million in spending throughout the state's economy.
- About 70% of ITC Michigan's capital investments from 2007-2014 remained in the state, supporting employees and vendors.



Source: Anderson Economic Group analysis of data sourced from ITC Holdings Corp.

INSIDE AN ELECTRIC BILL

Generation

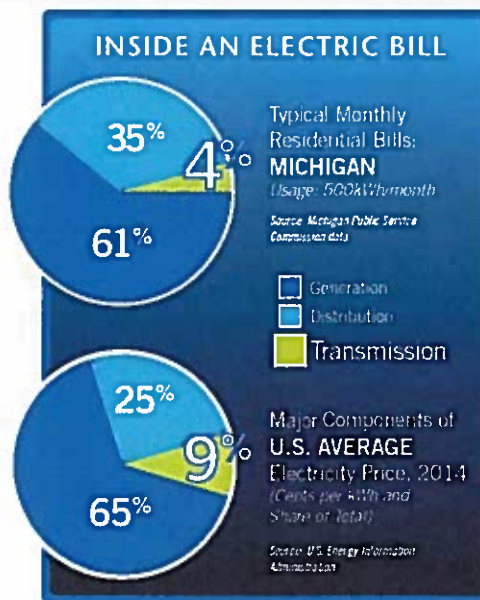
This charge reflects the amount of electricity you use - the energy that comes from power plants and other facilities to homes and businesses.

Distribution

This fee covers the local, lower-voltage power lines and associated facilities that transport the electricity from distribution substations to homes and businesses.

Transmission

This is the cost of delivering electricity via high-voltage power lines and associated facilities that transmit the electricity from power plants to distribution substations.



GRID INVESTMENT NEEDED

**Projected system needs to solve today's energy challenges:
\$120 - \$160 billion investment per decade through 2030***

STRESSED, INADEQUATE GRID

21st Century Requires
More Flexible,
Accessible Grid

REGIONAL INFRA- STRUCTURE

Intra and Inter-regional
Connectivity
Address Distributed
Generation/MicroGrids

CHANGING GENERATION FLEET

EPA Rules,
State-by-State
Needs,
Plant Closures

NEW DEMANDS AND USES

Support technology
and policy
developments

PLANNING REFORM

Planning reform could
save billions



AGING INFRASTRUCTURE

**"Electric power outages and
blackouts cost the nation about
\$80 billion annually."**

— Berkeley Lab/U.S. Department of Energy

"Loss of power for even a
few seconds across a site
can be a million dollar and
upward event for us."

— Dow Corning Corporation, an ITC customer

Society Runs
on Electricity

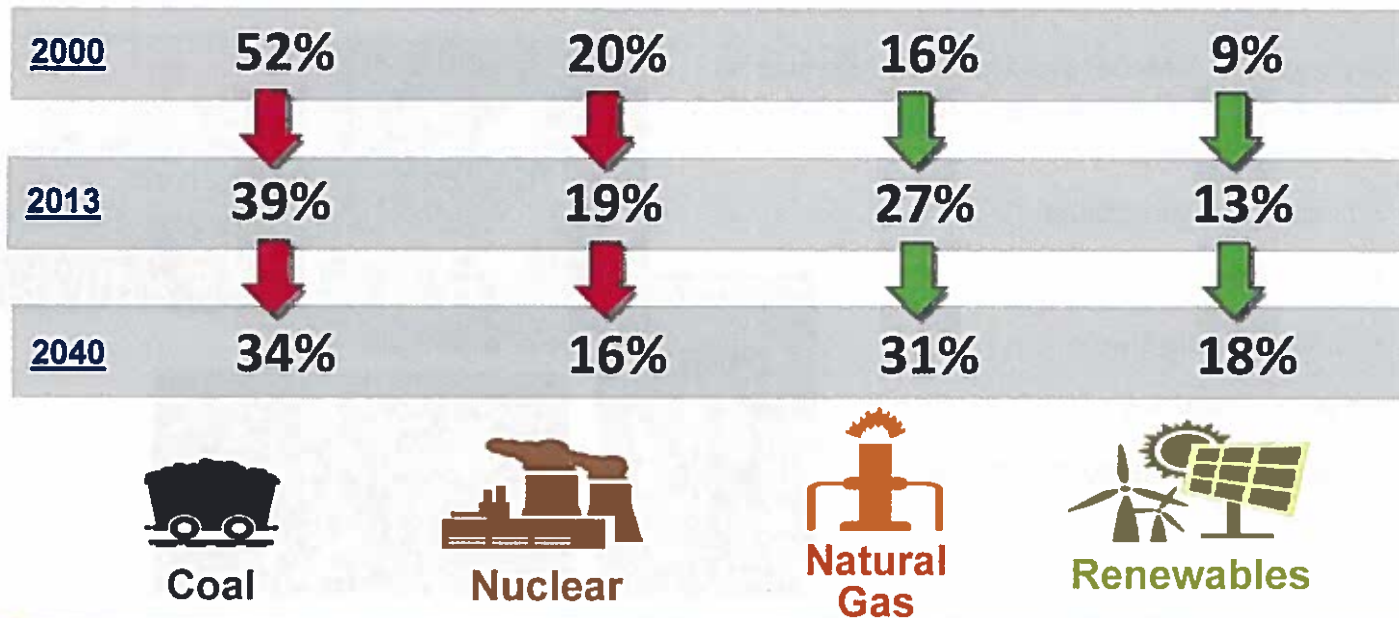
"Power outages close schools, shut down
businesses and impede emergency
services, costing the economy billions
of dollars and disrupting the lives of
millions of Americans."

*— President's Council of Economic Advisers /
U.S. Department of Energy*

\$16 million per day:
estimated cost of a power outage
at a major vehicle manufacturers'
technical center in Michigan



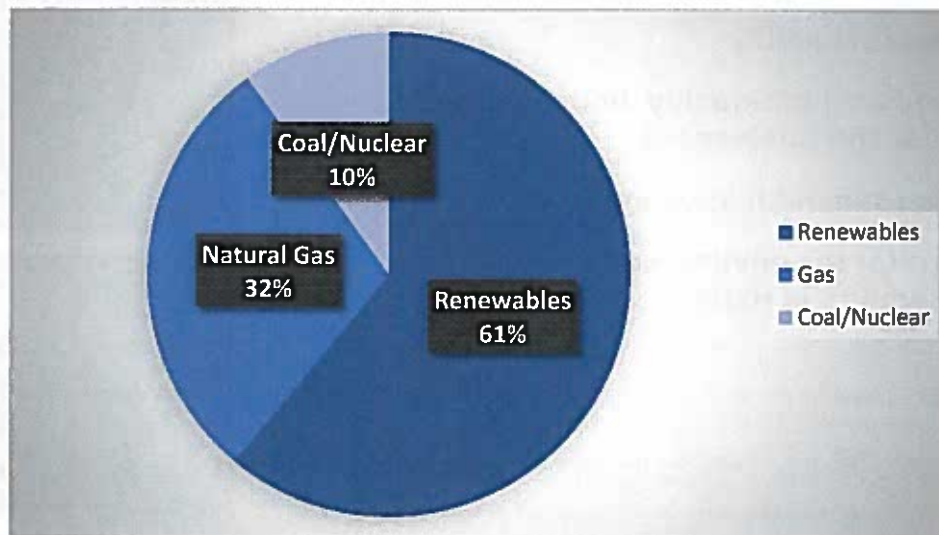
CHANGING GENERATION MIX



Source: EIA's Annual Energy Outlook 2015

ITC MICHIGAN

2,147 MW of Connected Generation in Michigan Since 2003



NEW DEMANDS AND USES

A modern, interconnected grid needed to support 21st Century technology and policy developments:

- Distributed generation
- Demand response
- Efficiency programs
- Electric vehicles
- Renewable energy technology



CONSUMER AWARENESS

Customer Trends

Desire for higher reliability

Increasing need for high-quality, uninterrupted power in homes and businesses

Increasing environmental awareness

Public concern for the environmental impacts of energy generation is rising



* Polling results from survey conducted online by Research Now, an independent opinion research company, with a nationally representative audience of 800 U.S. adults age 18+. The precision of online polls is calculated using a credibility interval, with a poll of 800 accurate to roughly +/- 4 percentage points.
*Quotation from blinded interviews with senior-level officials engaged in energy-related decisions at their organizations conducted by an independent interviewer.



EVOLVING POLICIES

Regulatory Climate: Key Issues

EPA Clean Power Plan

Distributed Generation/Microgrids

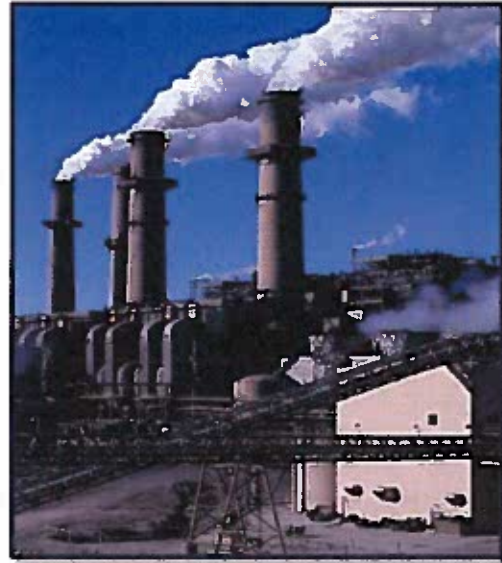
Integrated Resource Plans

State RPS Standards

Grid Security

Re-regulation

Production Tax Credits



FERC ORDER 1000

- FERC Order 1000 introduced in 2011 to reform electric transmission planning and cost allocation
 - Goal was to create more competitive wholesale markets for electricity by removing barriers to building new interstate transmission lines.
- Order 1000 removes protection for incumbent transmission developers for certain projects
 - Some states responded by passing legislation to eliminate such competition
 - Michigan is a competitive state. Any project in Michigan that meets the competitive criteria would be subject to competition.



CHALLENGES

The Challenge in Michigan

Changes in the Energy Industry Impact Transmission Locally

Generation:

- Many base load plants will be retired
- New forms of generation (wind, solar, biofuels, etc.) coming online

New Demands / Uses:

- Demand response, efficiency programs, electric vehicles

Policy Focus:

- Increased attention to grid security, environment and creation of related energy policies
- Changes outside the state affect Michigan

A robust transmission grid is needed to support these changes



TOWARD A BETTER, STRONGER GRID

Utilities | Regulators | Communities | Planners | Customers | Stakeholders

Common Purpose: Ensuring the connection between consumers and the energy they need is efficient, reliable and cost-effective.

Common Issues: Evolving energy landscape. Transmission's backbone role in electricity delivery must be factored into planning the grid of the future.

ITC's commitment:

- Good stewards of the grid
- Respect for the environment
- Take the perspective of what is good for customers and the grid





Thank You



A FORTIS COMPANY

